

Appl. No.: 10/075,150
Response dated May 1, 2006
Reply to Office Action mailed January 31, 2006

REMARKS/ARGUMENTS

The office action mailed January 31, 2006, has been carefully reviewed and these remarks are responsive to that office action. Reconsideration and allowance of this application are respectfully requested.

Claim Rejections - 35 USC § 103

Claims 1-51 were rejected under 35 U.S.C. 103(a) as being unpatentable over Veschi et al. (U.S. Patent 5,923,655) in view of Yano et al. (U.S. Patent 6,807,235), further in view of Qiao (U.S. Patent 6,956,868).

On pages 2-3, the office action cites the position identifier 370 of Veschi as specifying a relationship between the current packet of the current burst of packets and a subsequent burst of packets. On pages 3-4, the office action cites DPCCH of Yano as a parameter received that allows the receiver to enter a reduced power-consumption state for a duration between a current burst of packets and a subsequent burst of packets. On pages 4-5, the office action cites Qiao as teaching that it is well known to include a time-slice parameter (e.g., offset time) in a current packet to indicate a time before transmission of the corresponding burst.

Veschi, Yano, and Qiao, either alone or in combination, do not disclose, teach, or suggest "an encapsulator ... that forms at least one packet header for a current packet of a current burst of packets, wherein the current packet contains a first portion of the buffered content, wherein the at least one packet header contains time-slice information that includes a time-slice parameter specifying a relationship between the current packet of the current burst of packets and a subsequent burst of packets that contains a second portion of the buffered content ... thereby allowing a digital-video-broadcast receiver to enter a reduced power-consumption state for a duration, which is based at least in part on the time-slice parameter, between receiving the current burst of packets and receiving the subsequent burst of packets," as recited in claim 1.

Veschi, Yano, and Qiao contain unrelated teachings regarding: a position identifier in a buffer; a frame of control information, transitions between the absence and presence of which cause Yano's system to remove or restore a clock signal to portions of the receiver circuitry; and a time-related parameter that is transmitted on a control channel that is separate from the channel

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used by Qiao's system to transmit data via wavelength-division multiplexed transmissions over optical media.

Veschi discloses a system for communicating audio/video data in a packet-based computer network in which transmission of data packets through the network requires variable periods of transmission time. The system comprises: (1) a packet-assembly circuit for constructing a data packet from a portion of a stream of digital audio/video data corresponding to an audio/video signal and (2) a packet-disassembly circuit, having an associated buffer, for receiving the data packet. The packet-assembly circuit generates a position identifier indicating a temporal position of the portion of the stream relative to an immediately preceding portion of the stream, inserts the position identifier into the data packet, and queues the data packet for transmission through a backbone of the computer network. The packet-disassembly circuit inserts the portion of the data stream into an absolute location of the buffer based on the position identifier so that the portion of the data stream is synchronized with the immediately preceding portion of the data stream in the buffer to compensate for the variable periods of transmission time. (Veschi, Abstract, col. 13, line 33, through col. 16, line 31).

The position identifier 370 of Veschi is used to specify an absolute location within the receiving buffer on a packet-by-packet basis. Veschi discloses that a packet's position identifier determines its location in the receiving buffer 510, which, in turn, synchronizes the packet's audio/video data sample with adjacent audio-video data samples in the receiving buffer 510 to compensate for variable periods of transmission time. (Col. 13, lines 34-45). The synchronization of a packet's data sample in the receiving buffer with an immediately following data sample is not achieved, however, until the immediately following data sample's packet is received and the immediately following data packet's position identifier indicates an absolute location in the receiving buffer into which the immediately following data packet's data sample should be placed. Accordingly, the position identifier of a current packet indicates a receiving-buffer position for the packet's audio/video data sample such that the current packet's data sample becomes synchronized in the receiving buffer relative to the buffer position of an immediately preceding packet's audio/video data sample.

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As such, Veschi does not disclose, teach, or suggest using a current packet's position identifier (or any other data within the current packet) to specify a relationship between the current packet and a subsequent packet or a subsequent burst of packets.

On page 3, the office action states that Veschi may not specifically disclose that the packet-header information comprises a time-slice parameter or a parameter that allows the receiver to enter a reduced power-consumption state for a duration. The office action cites Yano as teaching a parameter that allows the receiver to enter a reduced power-consumption state for a duration and cites Qiao as teaching that the information comprises a time-slice parameter.

On pages 3-4, the office action cites DPCCH of Yano as including a parameter received that allows the receiver to enter a reduced power-consumption state for a duration between a current burst of packets and a subsequent burst of packets. But the parameter is not in a packet header of a current packet of a current burst of packets and does not specify a relationship between the current packet and a subsequent burst of packets.

Yano discloses a system in which a portion of the receiver is always on checking for the presence of control information and data information. This checking occurs at the beginning of each frame of packets. Based on a change in the presence or absence of control and/or data information at the beginning of each frame of packets, signal-processing components of the receiver either enter or exit power-saving mode.

"DPCCH" refers to control information. (Yano, col. 1, lines 64-67). A transition from the presence of DPCCH (i.e., control information) and/or DPDCH (i.e., data information) to the absence of DPCCH and/or DPDCH from the received signal is what causes the system disclosed by Yano to enter a reduced power-consumption state. A corresponding transition from the absence to the presence of DPCCH and/or DPDCH causes the system disclosed by Yano to exit the reduced power-consumption state. As such, DPCCH does not contain a parameter that is contained in a packet header of a current packet of a current burst of packets such that a digital-video-broadcast receiver is allowed to enter a reduced power-consumption state for a duration, which is based at least in part on the parameter, between receiving the current burst of packets and receiving the subsequent burst of packets, as recited in claim 1.

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On pages 4-5, the office action cites Qiao for teaching that it is well known to include a time-slice parameter (e.g., offset time) in a current packet to indicate a time before transmission of the corresponding burst.

Qiao doesn't teach including a time-slice parameter in a current packet as recited in claim 1. The offset time is not included in a header of a current packet that contains data from an information service provider. Instead, the offset time of Qiao is transmitted on a separate dedicated control channel. (Qiao, col. 2, lines 5-10).

Qiao discloses that optical burst switching (OBS) uses an optical switching paradigm to combine the best features of optical circuit switching and packet/cell switching. OBS provides improvements over Wavelength-Routing in terms of bandwidth efficiency and core scalability via the statistical multiplexing of bursts. In addition, by sending a control packet carrying routing information on a separate control wavelength (channel) with an offset time, i.e., a lead time before the transmission of the corresponding burst (or data), the use of fiber-delay lines (FDLs) can be eliminated. (Qiao, col. 2, lines 1-10).

Qiao discloses a control packet for a current burst of packets that includes an offset time between transmission of the control packet and the current burst. The control packet is not part of a header of a current packet of the current burst of packets. And the offset time does not specify a relationship between the current packet of a current burst of packets and a subsequent burst of packets.

As such, Veschi, Yano, and Qiao, either alone or in combination do not disclose, teach, or suggest "an encapsulator ... that forms at least one packet header for a current packet of a current burst of packets, wherein the current packet contains a first portion of the buffered content, wherein the at least one packet header contains time-slice information that includes a time-slice parameter specifying a relationship between the current packet of the current burst of packets and a subsequent burst of packets that contains a second portion of the buffered content ... thereby allowing a digital-video-broadcast receiver to enter a reduced power-consumption state for a duration, which is based at least in part on the time-slice parameter, between receiving the current burst of packets and receiving the subsequent burst of packets," as recited in claim 1.

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Moreover, the asserted motivation for combining Qiao with Veschi and Yano does not set forth a convincing line of reasoning as to why a person of ordinary skill in the art would be motivated to make the combination proposed in the office action. The motivation asserted, on pages 4-5 of the office action, for combining Qiao with Veschi and Yano, namely, achieving "packet communications with reduced software and hardware redundancies, and increased efficiency and interoperability" is set forth in Qiao as an advantage of integrating Internet Protocol over wavelength division multiplexed transmissions, as opposed to having an IP layer as well as a separate WDM layer. (Qiao, col. 2, lines 34-43). As such, a person of ordinary skill in the art would not be motivated to combine Qiao with Veschi and Yano in the manner proposed in the office action.

Further, the rejection of claim 1 is improper because, in the prior art, the "offset time" of Qiao is used for a different purpose, namely, to eliminate the need for fiber-delay lines (Qiao, col. 2, lines 5-10), than the purpose for which the "offset time" is used in the rejection, namely, as the time-slice parameter in a packet header of a current packet of a current burst of packets, wherein the time-slice parameter allows a digital-video-broadcast receiver to enter a reduced power-consumption state for a duration, which is based at least in part on the time-slice parameter, between receiving the current burst of packets and receiving the subsequent burst of packets.

Finally, the rejection of claim 1 is improper because it impermissibly tries to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art in an attempt to render the claimed invention obvious. "One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention." In re Fritch, 23 USPQ2d 1780 (Fed. Cir. 1992).

For at least the foregoing reasons, applicant respectfully submits that Veschi, Yano, and Qiao, either alone or in combination, fail to establish prima facie obviousness of claim 1, which is, therefore, in condition for allowance.

Claims 14, 24, 30, and 38 contain limitations that are analogous to the limitations discussed above in connection with claim 1. Therefore, for reasons similar to those discussed

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above with respect to claim 1, applicant respectfully submits that claims 12, 24, 30, and 38 are allowable.

Claims 2, 4, 8-13, 15-19, 20-23, 25-29, 31-33, 35-37, 39-42, 44-47, and 48-51 properly depend upon one of the independent claims discussed above. These dependent claims are, therefore, in condition for allowance for at least the reasons set forth above in connection with the independent claims upon which these dependent claims depend.

CONCLUSION

If any fees are required or if an overpayment is made, the Commissioner is authorized to debit or credit our Deposit Account No. 19-0733, accordingly.

All rejections having been addressed, applicant respectfully submits that this application is in condition for allowance and respectfully requests issuance of a notice of allowance.

Respectfully submitted,

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